

REMARKS/ARGUMENTS

Reconsideration of the application in view of the above amendments and the following remarks is respectfully requested.

The Examiner objects to Claim 8 because of the word "or" should be deleted from line 13. The Claim has been so corrected.

The Examiner rejects Claims 1-4, 8-11 and 15-18 under 35 U.S.C. § 103(a) as being unpatentable over applicant's admitted prior art (APA) in view Erckert. The Examiner states that the APA teaches a failsafe detection apparatus for a differential receiver comprising a window comparator, a timer for the bus activity signal, and a failsafe indicator gate coupled to the timer and window comparator but does not teach the timer being coupled to both the bus activity signal and the output of the window comparator. The Examiner states that Erckert discloses a receiving circuit that contains a window comparator that is connected to a timer and concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the timer and window comparator of Erckert with the timer of the APA to have a timer that would receive inputs from both the bus activity signal and the output of the window comparator. The Examiner states that this would have been obvious because the timer of Erckert insures that no logical values changed on the window comparator for more than a predetermined amount of time resulting in violation of a protocol.

We cannot agree. Referring to the bottom of column 3 through column 4 of Erckert, it is clear that the circuits COMP1a and COMP1b perform the same function as the signal transition detector shown in Figure 1 of the present application. Thus, although the circuit configuration is different, the output of the circuit is the timer reset signal which appears on line 11 in both the APA and the present invention. Accordingly, combining Erckert with the APA would result only in a different circuit for generating the timer reset signal on line 11, and not for providing two signals to the activity timer as in the present invention, the Examiner's statements to the contrary notwithstanding. Secondly, the timer utilized in Erckert is not utilized to control the output to provide a failsafe indicator signal, as in the present invention.

There are two times in the function of the circuit when the detector detecting when the signals drops below a failsafe threshold will produce erroneous results. The first of these is when there is a signal transition, where the threshold detector will detect the data signal transitioning through the threshold. The second condition is when there is noise present on the line, which noise is of sufficient amplitude to drive one of the input signals below the failsafe threshold for a short period of time. The result is, if the activity timer has timed out, that the failsafe detector will cause a transition in the output, which transition is an error, since no valid data has been presented. In order to avoid this unwanted consequence of the failsafe detector, the present invention resets the activity timer on both the occurrence of data and the occurrence of noise or other false indications on the line so that a false condition is only detected both the activity timer times out and the fault condition still exists. This overcomes the problem of the prior art by eliminating the possibility that noise on the line will cause the device to issue an erroneous data signal or erroneously place the output at a predetermined state. There is no showing or suggestion in either of the APA or Erckert of this problem, or a solution thereto.

The claims have been amended in order to clarify this for the Examiner. Accordingly, Applicants believe the application, as amended, is in condition for allowance, and such action is respectfully requested.

Respectfully submitted,
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